

Comparisons of Job Characteristics

Focus Occupation: [Environmental Engineers \(17-2081\)](#)

Associated Occupation: [Natural Sciences Managers \(11-9121\)](#)

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

[Compare Detailed Work Activities](#)

[Compare Tools and Technologies](#)

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

Knowledge

Similarity of Focus Occupation to Associated Occupation: 63

Focus Occupation: Environmental Engineers (17-2081)

Associated Occupation: Natural Sciences Managers (11-9121)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Chemistry	4.8	13.5	15.8	>	Current knowledge level is likely sufficient
Administration and Management	8.4	12.8	11.8	0	Current knowledge level may be sufficient
Law and Government	5.9	12.1	13.6	>	Current knowledge level is likely sufficient
Biology	3.7	11.8	10.0	<	Expanded education and/or training may be required
Engineering and Technology	5.7	11.4	21.7	>>	Current knowledge level is likely more than sufficient
Geography	3.9	5.9	8.3	>>	Current knowledge level is likely more than sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Skills

Similarity of Focus Occupation to Associated Occupation: 77

Focus Occupation: Environmental Engineers (17-2081)

Associated Occupation: Natural Sciences Managers (11-9121)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Science	4.5	15.7	11.4	<<	Extensive development of skills in this area may be required
Time Management	8.9	13.9	10.3	<<	Extensive development of skills in this area may be required
Operations Analysis	5.0	13.6	11.0	<	A higher skill level may be required
Management of Personnel Resources	6.9	13.2	8.7	<<	Extensive development of skills in this area may be required
Coordination	9.1	12.3	9.7	<	A higher skill level may be required

Management of Financial Resources	3.3	8.9	7.2	<	A higher skill level may be required
Technology Design	2.6	7.6	5.5	<<	Extensive development of skills in this area may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Abilities		Similarity of Focus Occupation to Associated Occupation: 87			
Focus Occupation: Environmental Engineers (17-2081) Associated Occupation: Natural Sciences Managers (11-9121)					
Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Oral Comprehension	12.5	17.8	16.1	<	Some improvement in abilities may be required
Oral Expression	12.4	16.5	16.0	0	Current ability level may be sufficient
Written Comprehension	11.0	16.0	16.0	0	Current ability level may be sufficient
Deductive Reasoning	10.6	15.5	16.2	0	Current ability level may be sufficient
Speech Clarity	10.2	15.4	11.8	<<	Extensive improvement in abilities may be required
Inductive Reasoning	10.2	14.8	15.4	0	Current ability level may be sufficient
Written Expression	9.8	14.4	13.9	0	Current ability level may be sufficient
Speech Recognition	9.9	12.6	11.6	0	Current ability level may be sufficient
Originality	7.6	12.0	10.1	<	Some improvement in abilities may be required
Category Flexibility	9.0	11.6	13.6	>	Current ability level is likely sufficient
Number Facility	6.3	10.0	11.7	>	Current ability level is likely sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Activities that Both Occupations Have in Common		Similarity of Focus Occupation to Associated Occupation: 68
Focus Occupation: Environmental Engineers (17-2081) Associated Occupation: Natural Sciences Managers (11-9121)		
Work Activities	Exclusivity of Activity	
Adhere to safety procedures	12	
Advise clients or customers	19	
Analyze scientific research data or investigative findings	27	
Communicate technical information	4	
Confer with scientists	54	
Develop plans for programs or projects	31	
Develop policies, procedures, methods, or standards	21	
Estimate time needed for project	64	

Explain complex mathematical information	30
Prepare reports	8
Resolve engineering or science problems	46
Use library or online Internet research techniques	21
Use project management techniques	47
Use scientific research methodology	21

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Tools and Technologies that Both Occupations Have in Common

Similarity of Focus
Occupation to Associated
Occupation: 83

Focus Occupation: Environmental Engineers (17-2081)
Associated Occupation: Natural Sciences Managers (11-9121)

Tools and Technologies	Exclusivity
Audio and visual equipment	4
Business function specific software	1
Computer printers	2
Computers	1
Content authoring and editing software	1
Data management and query software	1
Electrochemical measuring instruments and accessories	9
Gas analyzers and monitors	10
Hydrological instruments	31
Indicating and recording instruments	2
Industry specific software	1
Information exchange software	1
Liquid and solid and elemental analyzers	19
Network applications software	1
Sampling equipment	12
Soil measuring equipment	20
Temperature and heat measuring instruments	6
Viewing and observing instruments and accessories	4

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.